Forest Insect and Disease Management Group, S&PF
2500 Shreveport Highway
Pineville, Louisiana 71360

3430 Evaluation
~~1330 Reports~~

January 29, 1980

Report No. 80-2-6

Robert C. Loomis, Field Representative
Alexandria Field Office

Travelers- Forrest L. Oliveria and Paul A. Mistretta

Date- October 2 - 4, 1979

Destination- Mobile, Alabama

Purpose- To examine timber damage caused by Hurricane Frederic in southern Alabama and Mississippi. Also, to assess the potential problems that might occur from insects or diseases in the downed, leaning, and broken timber.

Paul and Forrest met Jim Hyland of the Alabama Forestry Commission at Mobile on Tuesday and drove south from Mobile to Gulf Shores to examine the damage caused by Hurricane Frederic in this area. From Gulf Shores, we drove northeast and looped back toward Mobile along the eastern edge of the storm damage. Next, we went west across the bay through Mobile and toward the Mississippi-Alabama State line.

The damage to timber in these areas is very heavy. However, it was not continuous. The damage in some areas was extreme, while a hundred yards away, the damage was much less. However, as we got closer to the path of the hurricane eye, the occurrence of heavy damage was much more frequent. Many trees were root-sprung and leaning, broken off, or wind-thrown. Pines appeared to be the species that had suffered the most from breakage and leaning. Some hardwood species were wind-thrown and had broken limbs. Pecan trees were especially hard hit. This area produces a large pecan crop each year, and there are numerous large pecan orchards in the area. Many of the trees were blown down or had sustained severe limb breakage. In the area that is outlined by the Alabama Forestry Commission as having extreme damage, 50 to 60 percent of the pecan trees had been wind-thrown.

The live oak trees seem to have survived the storm with the least amount of damage. The live oaks in the city of Mobile and surrounding suburbs will have to be heavily pruned, but will still have the bulk of their major limbs. All of the hardwood trees look as if

they had been attacked by defoliators. The denuding of the hardwoods was caused by a combination of the 145 mph winds, flying debris, and salt spray. Some of the hardwood species, such as the remaining pecans, are refoliating.

The damage to the trees in southern Alabama along the path of Hurricane Frederic is similar to that which has been described in the literature. Pine stands that had been recently thinned sustained a high percentage of breakage. The stumps are approximately 15 to 25 feet tall and the broken trees had fallen toward the west or north. This indicates that the trees were broken as the hurricane moved inland in a north to northwesterly direction. The broken trees did not appear to have broken at what would have been considered a weak point, such as a gall caused by Cronartium sp. Many trees were observed which had cankers or a weak point, but which had broken at a point several feet above or below this defect.

Ground checked timber was found to contain attacks and developing brood of Ips beetles, both Ips calligraphus and Ips grandicollis. However, the incidence of attack was very low. No standing timber was found to have attacks of Ips beetles. All attacks were on broken timber or timber that was lying on the ground. The broken timber is drying out rapidly and will probably not sustain Ips beetle development much longer.

Damage to the pines is not concentrated enough to trigger development of epidemic Ips beetle populations. Some Ips beetle spots will occur throughout the area that has been damaged by Hurricane Frederic. However, the major potential problem appears to be in the northern part of the damaged area where many of the trees are root-sprung or have broken limbs. In these areas, the trees will be weakened enough that some SPB outbreaks are expected to occur in 1980.

On Tuesday afternoon, Jim Hyland, Paul Mistretta, and Forrest Oliveria met with Paul Peacher, Dr. Robert Lewis from Stoneville, Mississippi, and Dr. Dick Collins of the Mississippi Forestry Commission to discuss management strategies to be used to prevent or control possible outbreaks of insects and diseases in the hurricane-damaged areas in Mississippi and Alabama. It was our conclusion that the major problem at this time is one of utilization, not one of insects or disease. It is late enough in the year that there is little chance of having any insect or disease problems before winter. The damaged timber will continue to dry throughout the winter months. By the spring of 1980, the trees that will present the most favorable sites for insect and disease

development are those trees leaning from or root-sprung by the high wind. It was our conclusion that, at the present time, we will prepare to make an aerial survey flight during the month of November. A second flight will be scheduled for early spring of 1980, probably during late March or early April. If any spots are located during either of these flights, ground crews will check them and confirm the presence of Ips or southern pine beetles.

Appropriate control techniques will be employed, depending on the size of the spots, the time of the year, and the species of insects involved. If insect problems develop in these areas, appropriate suppression projects will be submitted by the State for the purpose of requesting assistance in controlling the outbreaks.

The State of Alabama has used aerial photographs and sketch mapping to make a 100 percent aerial survey of Baldwin and Mobile Counties. These aerial maps were sent to the Renewable Resource Evaluation group with the Southern Station in New Orleans. They are using them to determine the volume of leaning, broken, and downed timber. These volumes will be used to determine the value of the timber that was damaged during the hurricane. Alabama and Mississippi are awaiting the aerial photographs from a high altitude reconnaissance flight to continue their evaluation of the damage.

Wednesday was spent viewing the city of Mobile and the Corps of Engineers dump sites around the city.

On Thursday, Jim Hyland, Paul Mistretta, and Forrest Oliveria went to the Governor's Forest Disaster Recovery Council headquarters in Jackson, Alabama. The Disaster Center had several maps showing the extent of the hurricane damage, and organizational flow charts of the committees set up to handle various responsibilities in the aftermath of the hurricane. There also are two tollfree telephone lines into the Center for victims of the hurricane to call for assistance. Those lines are busy almost continuously throughout the day. There are so many calls on these lines that many of them are being routed to the Alabama Forestry Commission district headquarters at Saraland, Alabama, to help answer private citizen's questions. For each caller, a sheet is filled out containing their name and address, type of damage, species damaged, and expertise requested. These sheets will be used by the Alabama Forestry Commission to conduct followup service trips.

The Alabama Forestry Commission is in the process of hiring 10 additional temporary foresters to provide expertise to those people who have requested assistance.

The damage caused by Hurricane Frederic is extensive, and in some areas, very heavy. It has been approximately 3 weeks since the hurricane struck and it looks like it will be another 3 weeks, at least, before the bulk of the broken limbs, debris, and street cleanup is finished. There are still large piles of debris and trash piled along the streets in Mobile and other cities that were hit by the hurricane. The city park in Mobile became a city dump, with large, continuous piles of slash and trash over acres of lawn. Slash and trash were piled several feet deep around and between the trees in the park. The Corps of Engineers is in the process of removing this trash, but it will be 1 or 2 weeks yet before all of it is removed from the park. Trash and downed tree removal from the park are causing severe sod disturbance and soil compaction. Considerable soil stabilization will be needed in the park after the cleanup.

The Governor's Disaster Council is planned to be functional for 1 year from the date the hurricane struck. During that time, they plan to assist landowners with any problems they have resulting from the hurricane. After that time, the major forestry problem remaining from the hurricane would be reforestation. These problems will be referred to Forestry Incentives Program personnel.

The State of Alabama and the Alabama Forestry Commission have worked very hard to provide rapid and needed assistance to the landowners who have suffered from the hurricane. Most of the work has been done by the Emergency Services Committee of the Governor's Disaster Council. The Alabama Forestry Commission should be commended for the effort and time invested in providing the landowners with needed assistance and expertise.

F. L. OLIVERIA

FORREST L. OLIVERIA
Supervisory Entomologist

PAUL A. MISTRETTA

PAUL A. MISTRETTA
Supervisory Plant Pathologist

FLO/PAH:jw